

ARPM TOLERANCE TABLES

ARPM TABLE 3-MOLDED A2 PRECISION

STANDARD DIMENSIONAL TOLERANCE TABLE—MOLDED RUBBER PRODUCTS
 DRAWING DESIGNATION “A2” PRECISION

| Size (Millimeters) | Fixed | Closure | Size (Inches) | Fixed | Closure |
|--------------------------|-------|---------|--------------------------|--------|---------|
| Above - Including | | | Above - Including | | |
| 0 - 10 | ±0.16 | ±0.20 | 0 - 0.40 | ±0.006 | ±0.008 |
| 10 - 16 | 0.20 | 0.25 | 0.40 - 0.63 | 0.008 | 0.010 |
| 16 - 25 | 0.25 | 0.32 | 0.63 - 1.00 | 0.010 | 0.013 |
| 25 - 40 | 0.32 | 0.40 | 1.00 - 1.60 | 0.013 | 0.016 |
| 40 - 63 | 0.40 | 0.50 | 1.60 - 2.50 | 0.016 | 0.020 |
| 63 - 100 | 0.50 | 0.63 | 2.50 - 4.00 | 0.020 | 0.025 |
| 100 - 160 | 0.63 | 0.80 | 4.00 - 6.30 | 0.025 | 0.032 |
| 160 & over | | | 6.30 & over | | |
| multiply by | 0.004 | 0.005 | multiply by | 0.004 | 0.005 |

ARPM TABLE 13- DENSE CROSS-SECTION ORGANIC/SILICONE CLASS 2 PRECISION

STANDARDS FOR CROSS-SECTIONAL TOLERANCE TABLE

Note: Tolerances on dimensions above 100 mm (3.94 in.) should be agreed upon by supplier and user. General cross-sectional dimensions below 1mm (0.04 in.) are impractical. In general, softer materials and those requiring a post-cure need greater tolerances.

| ARPM Class | 1 | 2 | 3 |
|---------------------|----------------------|-----------------|------------------|
| Drawing Designation | High Precision E1 | Precision E2 | Commercial E3 |

Dimensions (in Millimeters)

| Above | - | Up to | 1 | 2 | 3 |
|-------|-----|-------|-------|-------|-------|
| 0 | 1.5 | | ±0.15 | ±0.25 | ±0.40 |
| 1.5 | 2.5 | | 0.20 | 0.35 | 0.50 |
| 2.5 | 4.0 | | 0.25 | 0.40 | 0.70 |
| 4.0 | 6.3 | | 0.35 | 0.50 | 0.80 |
| 6.3 | 10 | | 0.40 | 0.70 | 1.00 |
| 10 | 16 | | 0.50 | 0.80 | 1.30 |
| 16 | 25 | | 0.70 | 1.00 | 1.60 |
| 25 | 40 | | 0.80 | 1.30 | 2.00 |
| 40 | 63 | | 1.00 | 1.60 | 2.50 |
| 63 | 100 | | 1.30 | 2.00 | 3.20 |

| ARPM Class | 1 | 2 | 3 |
|---------------------|----------------------|-----------------|------------------|
| Drawing Designation | High Precision E1 | Precision E2 | Commercial E3 |

Dimensions (in Inches)

| Above | - | Up to | 1 | 2 | 3 |
|-------|------|-------|--------|--------|--------|
| 0 | 0.06 | | ±0.006 | ±0.010 | ±0.015 |
| 0.06 | 0.10 | | 0.008 | 0.014 | 0.020 |
| 0.10 | 0.16 | | 0.010 | 0.016 | 0.027 |
| 0.16 | 0.25 | | 0.014 | 0.020 | 0.031 |
| 0.25 | 0.39 | | 0.016 | 0.027 | 0.039 |
| 0.39 | 0.63 | | 0.020 | 0.031 | 0.051 |
| 0.63 | 0.98 | | 0.027 | 0.039 | 0.063 |
| 0.98 | 1.57 | | 0.031 | 0.051 | 0.079 |
| 1.57 | 2.48 | | 0.039 | 0.063 | 0.098 |
| 2.48 | 3.94 | | 0.051 | 0.079 | 0.126 |

ARPM TABLE 16- DENSE CUT LENGTH L2 COMMERCIAL

CUT LENGTH TOLERANCE TABLES FOR UNSPLICED EXTRUSION

Note: Special consideration of tolerances will have to be given to both extremely soft and high tensile stocks.

| RMA Class | | 1 | 2 | 3 |
|-------------------------|------|-----------|------------|--------------|
| Drawing Designation | | Precision | Commercial | Non-Critical |
| | | L1 | L2 | L3 |
| Length (in Millimeters) | | | | |
| Above | - | Up to | | |
| 0 | 40 | ±0.7 | ±1.0 | ±1.6 |
| 40 | 63 | 0.8 | 1.3 | 2.0 |
| 63 | 100 | 1.0 | 1.6 | 2.5 |
| 100 | 160 | 1.3 | 2.0 | 3.2 |
| 160 | 250 | 1.6 | 2.5 | 4.0 |
| 250 | 400 | 2.0 | 3.2 | 5.0 |
| 400 | 630 | 2.5 | 4.0 | 6.3 |
| 630 | 1000 | 3.2 | 5.0 | 10.0 |
| 1000 | 1600 | 4.0 | 6.3 | 12.5 |
| 1600 | 2500 | 5.0 | 10.0 | 16.0 |
| 2500 | 4000 | 6.3 | 12.5 | 20.0 |
| 4000 | | 0.16% | 0.32% | 0.50% |

Length (in Inches)

| Above | - | Up to | | |
|-------|-------|-------|-------|-------|
| 0 | 1.6 | ±0.03 | ±0.04 | ±0.06 |
| 1.6 | 2.5 | 0.03 | 0.05 | 0.08 |
| 2.5 | 4.0 | 0.04 | 0.06 | 0.10 |
| 4.0 | 6.3 | 0.05 | 0.08 | 0.13 |
| 6.3 | 10.0 | 0.06 | 0.10 | 0.16 |
| 10.0 | 16.0 | 0.08 | 0.13 | 0.20 |
| 16.0 | 25.0 | 0.10 | 0.16 | 0.25 |
| 25.0 | 40.0 | 0.13 | 0.20 | 0.40 |
| 40.0 | 63.0 | 0.16 | 0.25 | 0.50 |
| 63.0 | 100.0 | 0.20 | 0.40 | 0.63 |
| 100.0 | 160.0 | 0.25 | 0.50 | 0.80 |
| 160.0 | | 0.16% | 0.32% | 0.50% |

ARPM TABLE 37- LENGTH AND WIDTH DIE CUT SPONGE #2, BL2

Tolerances on length and width dimensions of die-cut sheet or strip, expanded, closed-cellular rubber.

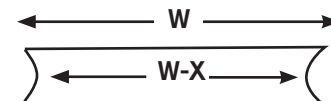
| RMA Class | 1 | 2 | 3 |
|------------------------------------|-----------|-------|-------|
| RMA Drawing Designation | BL1 | BL2 | BL3 |
| Millimeters | Tolerance | | |
| For thickness up to 6.3 mm* | | | |
| under 25 | ±0.63 | ±0.80 | ±1.0 |
| 25 to 160 | 0.80 | 1.0 | 1.25 |
| over 160 multiply by | 0.0063 | 0.01 | 0.016 |
| For thickness over 6.3 to 12.5 mm* | | | |
| under 25 | ±0.81 | ±1.0 | ±1.25 |
| 25 to 160 | 1.0 | 1.25 | 1.6 |
| over 160 multiply by | 0.0063 | 0.01 | 0.016 |
| For thickness over 12.5 mm* | | | |
| under 25 | ±1.0 | ±1.25 | ±1.6 |
| 25 to 160 | 1.25 | 1.6 | 2.0 |
| over 160 multiply by | 0.0063 | 0.01 | 0.016 |

*Separate schedules of length and width tolerances are listed for the different thicknesses of these materials because of the “dish” effect in die-cutting. This is more noticeable as the thickness increases. As shown in the drawing below, the “dish” effect is a concavity of die-cut edges (due to the squeezing of the material by the pressure of the cutting die).

| Inches | Tolerance | | |
|------------------------------------|-----------|--------|--------|
| For thickness up to .25 in.* | | | |
| under 1.0 | ±0.025 | ±0.032 | ±0.040 |
| 1.0 to 6.3 | 0.032 | 0.040 | 0.050 |
| over 6.3 multiply by | 0.0063 | 0.010 | 0.016 |
| For thickness over .25 to .50 in.* | | | |
| under 1.0 | ±0.032 | ±0.040 | ±0.050 |
| 1.0 to 6.3 | 0.040 | 0.050 | 0.063 |
| over 6.3 multiply by | 0.0063 | 0.010 | 0.016 |
| For thickness over .50 in.* | | | |
| under 1.0 | ±0.040 | ±0.050 | ±0.063 |
| 1.0 to 6.3 | 0.050 | 0.063 | 0.080 |
| over 6.3 multiply by | 0.0063 | 0.010 | 0.016 |

Figure 32

The width “W” (or length) at the top and bottom surface are slightly greater than the width “W-X” at the center.



Note: Class 1 tolerances should not be applied to the softer grades of material, below 63 kPa (9 psi).

ARPM TABLE 38 - SPONGE CROSS SECTION ORGANIC/SILICONE #1, BEC1

Tolerances on cross-sectional dimensions of irregular and cored shapes of extruded, expanded, closed-cellular rubber. Class 1 tolerances in the table below are recommended only for high volume, tight products for automotive applications.

| ARPM Class | 1* | 2 | 3 |
|--------------------------|-----------|------|-------|
| ARPM Drawing Designation | BEC1 | BEC2 | BEC3 |
| Millimeters | Tolerance | | |
| Above — Including | | | |
| 0 — 6.3 | ±0.4 | ±0.5 | ±0.63 |
| 6.3 — 12.5 | 0.63 | 1.0 | 1.25 |
| 12.5 — 25.0 | 1.25 | 2.0 | 2.5 |
| 25.0 — 40.0 | 2.0 | 3.2 | 4.0 |
| 40.0 & over multiply by | 0.06 | 0.08 | 0.1 |

| ARPM Class | 1* | 2 | 3 |
|--------------------------|-----------|--------|--------|
| ARPM Drawing Designation | BEC1 | BEC2 | BEC3 |
| Inches | Tolerance | | |
| Above — Including | | | |
| 0 — 0.25 | ±0.016 | ±0.020 | ±0.025 |
| 0.25 — 0.50 | 0.025 | 0.040 | 0.050 |
| 0.50 — 1.0 | 0.050 | 0.080 | 0.100 |
| 1.0 — 1.6 | 0.080 | 0.125 | 0.160 |
| 1.6 & over multiply by | 0.060 | 0.080 | 0.100 |

*Class 1 tolerances should not be applied to the softer grades of material—below 63 kPa (9 psi) compression deflection.

ARPM TABLE 40 - SPONGE CUT LENGTH #1, BEL 1

Tolerances on cut lengths of all extruded, expanded, closed-cellular rubber products.

| RMA Class | | | 1* | 2 | 3 |
|-------------------------|---|-----------|-----------------|------|------|
| RMA Drawing Designation | | | BEL1 | BEL2 | BEL3 |
| Millimeters | | | Tolerance | | |
| Above | — | Including | | | |
| 0 | | 80 | ±1.6 | ±1.6 | ±3.2 |
| 80 | | 160 | 3.2 | 3.2 | 6.3 |
| 160 | | 315 | 6.3 | 6.3 | 12.5 |
| 315 | | 630** | multiply by .02 | 12.5 | 25.0 |
| 630 | | 1250** | multiply by .02 | 25.0 | 50.0 |
| 1250 & over multiply by | | | 0.02 | 0.03 | 0.04 |

| RMA Class | | | 1 | 2 | 3 |
|-------------------------|---|-----------|-----------------|--------|--------|
| RMA Drawing Designation | | | BEL1 | BEL2 | BEL3 |
| Inches | | | Tolerance | | |
| Above | — | Including | | | |
| 0 | | 3.15 | ±0.063 | ±0.063 | ±0.125 |
| 3.15 | | 6.3 | 0.125 | 0.125 | 0.250 |
| 6.3 | | 12.5 | 0.250 | 0.250 | 0.500 |
| 12.5 | | 25** | multiply by .02 | .500 | 1.000 |
| 24.0 | | 50** | multiply by .02 | 1.000 | 2.000 |
| 50.0 & over multiply by | | | 0.02 | 0.030 | 0.040 |

*Class 1 tolerances should not be applied to the softer grades of material—below 63 kPa (9 psi) compression deflection.

**Accurate measurement of long lengths is difficult because these materials stretch or compress easily. Where close tolerances are required on long lengths, a specific technique of measurement should be agreed upon between purchaser and manufacturer.